this section. The lifeboat shall be equipped with a searchlight constructed in accordance with subpart 161.006 of this subchapter Q (Specifications). The engine shall be fitted with a marine type generator or alternator insulated as required by AIEE rules for marine service capable of charging the batteries used for the searchlight as well as the starting batteries, if fitted. The battery box shall be in accordance with paragraph (a)(5) of this section.

(d) *Steel motor-propelled lifeboats with radio cabin and searchlight (Class 3).* (1) The engine shall be a reliable, marine type and shall be in accordance with paragraph (a)(5)(i) of this section. The engine shall be fitted with a marine type generator or alternator insulated as required by AIEE rules for marine service, capable of charging the batteries used for the radio and searchlight as well as the starting battery, if fitted.

(2) The radio and source of power for the radio and the searchlight shall be housed and protected from the elements by a suitable radio cabin. The entire installation shall comply with the requirements of the Federal Communications Commission, Rules Governing Stations on Shipboard in the Maritime Services. The radio cabin shall be of a size to contain the radio and source of power for the radio and searchlight, and the operator of the equipment. The top and sides of the radio cabin shall be watertight with the exception of the door which need not be watertight but shall be at least weathertight. The installation of the radio cabin shall take into consideration the concentration of weight in this area.

(3) The searchlight shall be of an approved type constructed in accordance with specification Subpart 161.006 of this subchapter and shall be securely mounted on top of the radio cabin.

(4) The batteries shall be installed in a box securely fastened inside the radio cabin. The battery box shall be in accordance with paragraph (a)(5) of this section.

[CGFR 65–9, 30 FR 11467, Sept. 8, 1965, as amended by CGD 72–133R, 37 FR 17039, Aug. 24, 1972; CGD 73–116R, 39 FR 12747, Apr. 8, 1974]

§ 160.035–6 Construction of aluminum oar-, hand-, and motor-propelled lifeboats.

(a) *General.* Aluminum lifeboats shall comply with the general requirements for the construction and arrangement of steel lifeboats unless otherwise specified.

TABLE 160.035–6—ALUMINUM LIFEBOATS

Length of boat not over (feet)	Bar keel, stem and sternpost (inches)	Gunwales [1]		Shell plating (Brown and Sharpe gage) [2]											
				Independent air tanks				Built-in-air tanks							
				5052–H32		6061–T6		5052–H32				6061–T6			
	5086–H112/6061–T6	Angle bar (inches) 5086–H112/6061–T6	Flanged flat bar (inches) 5086–H112/6061–T6	Side	Bottom	Side	Bottom	Side	Bottom	Inner shell	Bulk-heads	Side	Bottom	Inner shell	Bulk-heads
12.0	2¾x¾	2¼x2x5/16	4x5/16	14	14	14	14	14	14	14	14	14	14	15	15
14.0	2¾x¾	2¼x2x5/16	4x5/16	14	14	14	14	14	14	14	14	14	14	15	15
16.0	2¾x¾	2½x2¼x5/16	4½x5/16	14	14	14	14	14	14	14	14	14	14	15	15
18.0	3x¾	2½x2¼x5/16	4½x5/16	14	14	14	14	14	14	14	14	14	14	15	15
20.0	3x1	2¾x2½x5/16	5x5/16	13	13	13	13	13	13	14	14	13	13	14	14
22.0	3x1	2¾x2½x5/16	5x5/16	12	12	12	12	13	12	14	14	13	13	14	14
24.0	3¼x1	2¾x2½x⅜	5x⅜	11	11	11	11	11	11	13	13	12	12	14	14
26.0	3½x1	2¾x2½x⅜	5x⅜	10	9	11	10	11	10	12	12	11	11	13	13
28.0	3¾x1	2¾x2½x⅜	5x⅜	9	8	10	9	10	9	12	12	11	10	13	13
30.0	4x1	3x2¾x⅜	5½x⅜	9	8	9	8	9	8	11	11	10	9	12	12
32.0	4x1	3x2¾x⅜	5½x⅜	8	7	9	8	9	8	11	11	10	9	12	12
34.0	4x1	3x2¾x⅜	5½x⅜	8	7	8	7	8	7	10	10	9	8	11	11
36.0	4x1	3x2¾x⅜	5½x⅜	7	6	8	7	8	7	10	10	9	8	11	11

[1] Extruded shapes having substantially the scantlings of the angle bar gunwale are permitted. Where extruded shapes are used, a nosing as per § 160.035–3(j) is not required provided the extruded shape has at its heel a generously rounded curve.

[2] Brown and Sharpe gage decimal values: 15 gage equals 0.05707, 14 gage equals 0.06408; 13 gage equals 0.07196; 12 gage equals 0.08081; 11 gage equals 0.09074, 10 gage equals 0.1019; 9 gage equals 0.1144; 8 gage equals 0.1285; 7 gage equals 0.1443, and 6 gage equals 0.1620.

(b) *Materials.* (1) Plating for shell, air tanks, etc., shall be as shown in Table 160.035–6.

(c) *Welding.* (1) Welding may be substituted for riveting in the following locations: Hoist plate to keel, disengaging gear grace plate to stem and sternpost, rudder attachment fitting to the sternpost, and the propeller shaft stern tube to the sternpost. When using 6061–T6 aluminum, the welded area is to be heat-treated and checked by X-ray to assure a satisfactory weld. When using 5086–H 112 aluminum, the welded area is to be checked by a nondestructive test method such as X-ray, ultrasonic waves or fluorescent materials, to assure a satisfactory weld. Other methods of checking aluminum welds will be given separate consideration. The welding shall be performed by a welder qualified by the U.S. Coast Guard, American Bureau of Shipping, or U.S. Navy Department, and only suitable electrodes shall be used. Details of the joints shall be indicated on the construction drawings submitted for approval.

(d) *Dissimilar metals.* (1) Where in the construction of aluminum lifeboats the use of dissimilar metals are employed such as, the installation of the mechanical disengaging gear, hand propelling gear, or engine, suitable insulation between the aluminum and these metals shall be used. Porous or absorbent materials shall not be used as insulating materials. Only non-porous materials such as plastics, rubber or neoprene base compounds, or micarta shall be used. Other suitable material will be given separate consideration. Fasteners used in joining dissimilar metals together shall be of the type that will minimize corrosion.

[CGFR 65–9, 30 FR 11467, Sept. 8, 1965, as amended by CGD 95–028, 62 FR 51213, Sept. 30, 1997]

§ 160.035–8 Construction of fibrous glass reinforced plastic (F.R.P.), oar-, hand-, and motor-propelled lifeboats.

(a) *General requirements.* (1) Plastic lifeboats shall comply with the general requirements for the construction and arrangement of steel lifeboats, except that unless otherwise specified, materials, scantlings, methods of construction, fastenings, methods of attachment of component parts, and other specific construction details may be varied by the builder in order to produce a structurally sound boat meeting in every respect recognized standards of first class construction and one which will satisfactorily meet the performance requirements set forth in this subpart.

(2) Fibrous glass reinforced plastic lifeboats may be of the following categories of hull construction:

A—Single piece, outer hull construction.
B—Two piece, outer hull construction.
C—Single piece, inner hull construction.
D—Two piece, inner hull construction.
E—Multi-piece, inner hull construction.

(b) *Specific requirements*—(1) *Resin.* The resin used shall be of the fire retardant, nonair inhibited-type conforming to Class A of Military Specification MIL–R–21607 and Grade A, Class O of Military Specification MIL–R–7575, including tests after 1 year's weathering. In addition, the test panels shall be tested for continued conformance with Military Specification MIL–R–21607. All tests, including weathering of samples, shall be accomplished by an independent laboratory. Complete certification by the independent laboratory with test data shall be submitted to Coast Guard (G–MSE) for acceptance. Class A resin shall be fire retardant without additives. Class B resins will be given consideration upon request. Class B resin shall be fire retardant with additives and shall meet the same test requirements as that for Class A resins. When Class B resin is used for the prototype lifeboat, additives for fire retardancy shall not be used in order to obtain a translucent laminate for inspection purposes. This prototype test lifeboat will not be stamped approved, nor will it be acceptable for merchant vessels. Whichever class of resin the manufacturer decides to use for his prototype lifeboat, shall be used in his production lifeboats. A note to this effect shall be included in his specifications and drawings for this particular size and type lifeboat.

(2) *Glass reinforcement.* The glass reinforcement used shall have good laminated wet strength retention and shall